

What is claimed is:

1. A computer implemented system for generating an application without the necessity of specifying programatic steps in a character based representation comprising:

- a. means for wrapping standardized objects with additional properties and events beyond those properties and events provided in the standardized object; and
- b. means for utilizing the additional properties and events to link and sequence the objects into the application.

2. A computer implemented system for generating an application without the necessity of specifying programatic steps in a character based representation comprising:

- a. means for simultaneously displaying different representations of the program structure; and
- b. means for manipulating the program structure within each of the four different representations;

wherein the representations of the program structure may be synchronized among displays at the election of the user.

3. The system of claim 2 further comprising a means for highlighting the depiction of the objects in the representations as those objects are being realized during application development playback preview.

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4. A computer implemented system which does not require the necessity of specifying programatic steps in a character based representation comprising:

a. a development environment and a playback environment that have no logical operators; and

5 b. means for utilizing, by specifying property values, standard objects.

5. The system of claim 4 further comprising a means for communicating among standard objects through the exchange of property values.

6. The system of claim 5 further comprising a means for communicating among standard objects wherein an event generated by an object triggers an instance of an another object.

7. The system of claim 4 further comprising a means for communicating among standard objects wherein an event generated by an object triggers an instance of an another object.

8. A computer implemented system which does not require the necessity of specifying programatic steps in a character based representation comprising:

a. a development environment and a playback environment that have no arithmetic operators; and

b. means for utilizing, by specifying property values, standard objects.

9. The system of claim 8 further comprising a means for communicating among standard objects through the exchange of property values.

10. The system of claim 9 further comprising a means for communicating among standard objects wherein an event generated by an object triggers an instance of an

another object.

11. The system of claim 8 further comprising a means for communicating among standard objects wherein an event generated by an object triggers an instance of an another object.

12. A computer implemented system which does not require the necessity of specifying programatic steps in a character based representation comprising:

a. a development environment and a playback environment that have no definable data structure architecture; and

b. means for utilizing, by specifying property values, standard objects.

13. The system of claim 12 further comprising a means for communicating among standard objects through the exchange of property values.

14. The system of claim 13 further comprising a means for communicating among standard objects wherein an event generated by an object triggers an instance of an another object.

15. The system of claim 12 further comprising a means for communicating among standard objects wherein an event generated by an object triggers an instance of an another object.

16. The system of claim 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, or 15 further comprising a means for adding additional programming constructs by employing standard objects that perform the work of programming constructs wherein unlimited expansion of program capabilities is achieved.

17. A computer implemented system comprising:

- a. a run time program that has no logical operators; and
- b. means for utilizing standard objects by identifying the objects and specifying property values.

18. A computer implemented system comprising:

- a. a run time program that has no arithmetic operators; and
- b. means for utilizing standard objects by identifying the objects and specifying property values.

19. A computer implemented system comprising:

- a. a run time program that has no definable data structure architecture; and
- b. means for utilizing standard objects by identifying the objects and specifying property values.

20. A computer implemented development and run time system utilizing a minimum set of core functionalities comprising:

- a. means for instantiating objects;
- b. means for integrating objects;
- c. means for sequencing objects;
- d. means for providing communication among objects; and
- e. means for synchronizing views

wherein the displayed functionalities performed by the system during execution are determined by the choice of objects used and the manner of their implementation in the system.

21. A computer implemented run time system utilizing a minimum set of core functionalities comprising:

- a. means for instantiating objects;
- b. means for integrating objects;
- c. means for sequencing objects; and
- d. means for providing communication among objects;

wherein the displayed functionalities performed by the system during execution are determined by the choice of objects used and the manner of their implementation in the system.

22. A computer implemented system for arranging objects in time and on or off of a visually perceptible display device comprising:

- a. means for setting the values of properties and connecting events;
- b. means for recording and maintaining a history of properties settings and event connections as the settings and connections are changed; and
- c. means for traversing the history one change at a time

wherein the property values and event connections may be edited from any point in the history.

23. A computer implemented run time system which does not require the necessity of specifying programatic steps in a character based representation that dynamically executes objects comprising:

- a. means for wrapping standardized objects with additional properties and events beyond those properties and events provided in the standardized

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object;

- b. means for utilizing the additional properties and events to link and sequence the objects; and
- c. means for reading one or more sets of property values maintained separately from the run time system and the objects

wherein the execution of the objects is governed by the property values.

24. The system of claim 23 further comprising means for adding programming constructs and sub-languages utilizing objects.

25. A computer implemented system which does not require the necessity of specifying programatic steps in a character based representation that distributes processing to objects, provides and manages data flow among objects, and manages the execution scheduling of objects comprising:

- a. means for wrapping standardized objects with additional properties and events beyond those properties and events provided in the standardized object;
- b. means for utilizing the additional properties and events to link and sequence the objects;
- c. means for specifying property values; and
- d. means for saving the property values to a separate file

wherein the run time execution of the objects is determined by the property values.

26. A computer implemented system which implements parallel processing without

AI the necessity of specifying programatic steps in a character based representation comprising:

- a. means for wrapping standardized objects with additional properties and events beyond those properties and events provided in the standardized object;
- b. means for utilizing the additional properties and events to link and sequence the objects; and
- c. means for specifying the temporal relationship among standard objects by placing the objects on one or more time lines

wherein execution of the objects occurs at least partially concurrently and during which property values may be exchanged among the objects and events may be initiated.

27. A computer implemented system in which the function of programming constructs is achieved by utilization of standard objects comprising:

- a. means for wrapping standardized objects with additional properties and events beyond those properties and events provided in the standardized object;
- b. means for utilizing the additional properties and events to link and sequence the objects into the application; and
- c. means for specifying a list of property values

wherein the execution of the objects is determined by a list of property values.

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28. A computer implemented software method for generating an application without the necessity of specifying programatic steps in a character based representation comprising the steps of:

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- a. wrapping standardized objects with additional properties and events beyond those properties and events provided in the standardized object; and
 - b. utilizing the additional properties and events to link and sequence the objects into the application.

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29. A computer implemented software method for generating an application without the necessity of specifying programatic steps in a character based representation comprising the steps of:

- 15
- a. simultaneously displaying different representations of the program structure; and
 - b. manipulating the program structure within each of the four different representations;

wherein the representations of the program structure may be synchronized among displays at the election of the user.

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30. The software method of claim 29 further comprising the step of highlighting the depiction of the objects in the representations as those objects are being realized during application development playback preview.

31. A computer implemented software method for programming a computer which does not require the necessity of specifying programatic steps in a character based

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representation comprising the steps of:

- a. utilizing a development environment and a playback environment that have no logical operators; and
- b. utilizing, by specifying property values, standard objects.

5 32. The software method of claim 31 further comprising the step of communicating among standard objects through the exchange of property values.

33. The software method of claim 32 further comprising the step of communicating among standard objects wherein an event generated by an object triggers an instance of an another object.

10 34. The software method of claim 31 further comprising the step of communicating among standard objects wherein an event generated by an object triggers an instance of an another object.

15 35. A computer implemented software method for programming a computer which does not require the necessity of specifying programatic steps in a character based representation comprising the steps of:

- a. utilizing a development environment and a playback environment that have no arithmetic operators; and
- b. utilizing, by specifying property values, standard objects.

20 36. The software method of claim 35 further comprising the step of communicating among standard objects through the exchange of property values.

37. The software method of claim 36 further comprising the step of communicating among standard objects wherein an event generated by an object triggers an instance

of an another object.

38. The software method of claim 35 further comprising the step of communicating among standard objects wherein an event generated by an object triggers an instance of an another object.

39. A computer implemented software method for programming a computer which does not require the necessity of specifying programatic steps in a character based representation comprising the steps of:

- a. utilizing a development environment and a playback environment that have no definable data structure architecture; and
- b. utilizing, by specifying property values, standard objects.

40. The software method of claim 39 further comprising the step of communicating among standard objects through the exchange of property values.

41. The software method of claim 40 further comprising the step of communicating among standard objects wherein an event generated by an object triggers an instance of an another object.

42. The software method of claim 39 further comprising the step of communicating among standard objects wherein an event generated by an object triggers an instance of an another object.

43. The software method of claim 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41 or 42 further comprising the step of adding additional programming constructs by employing standard objects that perform the work of programming constructs wherein unlimited expansion of program capabilities is achieved.

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44. A computer implemented software method for executing an application comprising the steps of:

- a. utilizing a run time program that has no logical operators; and
- b. utilizing standard objects by identifying the objects and specifying property values.

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45. A computer implemented software method for executing an application comprising the steps of:

- a. utilizing a run time program that has no arithmetic operators; and
- b. utilizing standard objects by identifying the objects and specifying property values.

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46. A computer implemented software method for executing an application comprising the steps of:

- a. utilizing a run time program that has no definable data structure architecture; and
- b. utilizing standard objects by identifying the objects and specifying property values.

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47. A computer implemented development and run time software method for developing and executing an application utilizing a minimum set of core functionalities comprising the steps of:

- a. instantiating objects;
- b. integrating objects;
- c. sequencing objects;

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- d. providing communication among objects; and
- e. synchronizing views

wherein the displayed functionalities performed by the software method during execution are determined by the choice of objects used and the manner of their implementation in the software method.

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48. A computer implemented run time software method for executing an application utilizing a minimum set of core functionalities comprising the steps of:

- a. instantiating objects;
- b. integrating objects;
- c. sequencing objects; and
- d. providing communication among objects;

wherein the displayed functionalities performed by the software method during execution are determined by the choice of objects used and the manner of their implementation in the software method.

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49. A computer implemented software method for arranging objects in time and on or off of a visually perceptible display device comprising the steps of:

- a. setting the values of properties and connecting events;
- b. recording and maintaining a history of properties settings and event connections as the settings and connections are changed; and

- c. traversing the history one change at a time

wherein the property values and event connections may be edited from any point in the history.

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50. A computer implemented run time software method which does not require the necessity of specifying programatic steps in a character based representation that dynamically executes objects comprising the steps of:

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- a. wrapping standardized objects with additional properties and events beyond those properties and events provided in the standardized object;
 - b. utilizing the additional properties and events to link and sequence the objects; and
 - c. reading one or more sets of property values maintained separately from the run time software method and the objects

10 wherein the execution of the objects is governed by the property values.

51. The software method of claim 50 further comprising the step of adding programming constructs and sub-languages utilizing objects.

15 52. A computer implemented software method which does not require the necessity of specifying programatic steps in a character based representation that distributes processing to objects, provides and manages data flow among objects, and manages the execution scheduling of objects comprising the steps of:

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- a. wrapping standardized objects with additional properties and events beyond those properties and events provided in the standardized object;
 - b. utilizing the additional properties and events to link and sequence the objects;
 - c. specifying property values; and

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- d. saving the property values to a separate file

wherein the run time execution of the objects is determined by the property values.

53. A computer implemented software method which implements parallel processing
5 without the necessity of specifying programatic steps in a character based
representation comprising the steps of:

- 10 a. wrapping standardized objects with additional properties and events
beyond those properties and events provided in the standardized object;
b. utilizing the additional properties and events to link and sequence the
objects; and
c. specifying the temporal relationship among standard objects by placing
the objects on one or more time lines

wherein execution of the objects occurs at least partially concurrently and
during which property values may be exchanged among the objects and events may
15 be initiated.

54. A computer implemented software method in which the function of
programming constructs is achieved by utilization of standard objects comprising the
steps of:

- 20 a. wrapping standardized objects with additional properties and events
beyond those properties and events provided in the standardized object;
b. utilizing the additional properties and events to link and sequence the
objects into the application; and

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c. specifying a list of property values

wherein the execution of the objects is determined by a list of property values.

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